

Worksheet 1: Runoff curve number CN

Client _____ By _____ Date _____

County _____ State _____ Checked _____ Date _____

Practice _____

Soil name and hydrologic group (table 2-1)	Cover description (cover type, treatment, and hydrologic condition)	CN (table 2-3)	Area (acres or %)	Product of CN x area
Totals=				

CN (weighted)

_____ = _____:

Use CN=

Worksheet 2: Time of concentration and peak discharge

Client _____ By _____ Date _____

County _____ State _____ Checked _____ Date _____

Practice _____

Estimating time of concentration

1. Data:

Rainfall distribution type = _____ (I, IA, II, III)

Drainage area A = _____ ac

Runoff curve number CN = _____ (Worksheet 1)

Watershed slope Y = _____ %

Flow length ℓ = _____ ft

2. T_c using ℓ , Y, CN and figure 2-27 = _____ hrs
or using equation 2-5

$$T_c = \frac{\ell^{0.8} \left[\left(\frac{1000}{CN} \right) - 9 \right]^{0.7}}{1140 Y^{0.5}} = \frac{(\quad)^{0.8} (\quad)^{0.7}}{1140 (\quad)^{0.5}} = \quad \text{hrs}$$

Estimating peak discharge

1. Frequency yr

2. Rainfall, P (24-hour) in

3. Initial abstraction, I_a in
(Use CN with table 2-4)

4. Compute I_a/P ratios

5. Unit peak discharge q_u cfs/ac/in
(Use T_c and I_a/P with exhibit 2-11)

6. Runoff, Q in
(Use P and CN with figure 2-26 or table 2-2)

7. Peak discharge, q_p cfs
(Where $q_p = q_u AQ$)

Storm #1	Storm #2	Storm #3